

WHAT IS CLAIMED IS:

1. A method of performing financial processing in one or more computers, comprising:

5 (a) selecting accounts, amounts and rates from account data stored in a database using selection criteria specified by one or more rules; and

(b) performing one or more Net Present Value (NPV) calculations on the selected accounts by applying one or more NPV forecast rules to the selected accounts using the selected amounts and rates, wherein the NPV calculations determine a present value of an expected profitability value of current products.

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2. The method of claim 1, wherein the step of performing the FV calculations comprises applying the NPV forecast rules to the selected accounts and applying NPV attrition rules to results of the NPV forecast rules.

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3. The method of claim 1, wherein the NPV is a net present profitability value.

4. The method of claim 1, wherein the selected accounts contain current profitability values.

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5. The method of claim 4, wherein the current profitability data is aggregated to provide an initial amount for the NPV calculations.

25 6. The method of claim 1, wherein the selected amounts are forecast amounts.

7. The method of claim 1, wherein the selected rates are NPV forecast rates.

30 8. The method of claim 1, wherein a user specifies one or more forecast periods over which the NPV calculations are performed.

9. The method of claim 8, wherein a user specifies one or more rates for the forecast periods.

10. The method of claim 1, wherein the step of applying the NPV forecast rules comprise:

matching the NPV forecast rule against the selected accounts;
obtaining an amount to be forecast from the matched accounts using forecast amount selection criteria specified in the NPV forecast rule;
obtaining account level information needed from the matched account data;
10 obtaining an Assumed Cash Flow for the matched accounts;
obtaining a Contractual Cash Flow from matched accounts;
mapping remaining terms of the matched accounts to forecast periods;
calculating amounts for each forecast period using the NPV forecast rule; and
storing the amounts.

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11. The method of claim 1, wherein the NPV forecast rule comprises a Constant (no compounding) method according to:

$$\text{Amount}_i = \text{Amount}_0 * (1 + R_0) * ((k - j + 1) / 12)$$

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where:

Amount_i = calculated amount by forecast period,

Amount₀ = initial amount,

R₀ = initial rate,

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i = forecast period,

j = first month in a forecast period, and

k = last month in a forecast period.

12. The method of claim 1, wherein the NPV forecast rule comprises a
30 Constant (with compounding) method according to:

$$\text{Amount}_i = \text{Amount}_0 * (1 + R_m)^i * ((k - j + 1) / 12)$$

where:

Amount_i = calculated amount by forecast period,

5 Amount₀ = initial amount,

R_m = monthly rate,

i = forecast period,

j = first month in a forecast period, and

k = last month in a forecast period.

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13. The method of claim 1, wherein the NPV forecast rule comprises an Additive (no compounding) method according to:

$$\text{Amount}_i = \text{Amount}_0 * (1 + i * (R_0 / 12)) * ((k - j + 1) / 12)$$

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where:

Amount_i = calculated amount by forecast period,

Amount₀ = initial amount,

R₀ = initial rate,

20 i = forecast period,

j = first month in a forecast period, and

k = last month in a forecast period.

14. The method of claim 1, wherein the NPV forecast rule comprises an Additive (with compounding) method according to:

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$$\text{Amount}_i = \text{Amount}_0 * (1 + \text{Compounded_Rate} * ((k - j + 1) / 12))$$

where:

30 Amount_i = calculated amount by forecast period,

Amount₀ = initial amount,

i = forecast period,

j = first month in a forecast period,

k = last month in a forecast period, and

5 Compounded_Rate = Rate₁ * Rate₂ * ... * Rate_i.

15. The method of claim 1, wherein the NPV forecast rule comprises a Manual (no compounding) method according to:

10 Amount_i = Amount₀ * (1 + R_{man}) * ((k - j + 1) / 12)

where:

Amount_i = calculated amount by forecast period,

Amount₀ = initial amount,

15 R_{man} = manual rate,

i = forecast period,

j = first month in a forecast period, and

k = last month in a forecast period.

20 16. The method of claim 1, wherein the NPV forecast rule comprises a Manual (with compounding) method according to:

$$\text{Amount}_i = \text{Amount}_0 * (1 + \text{Compounded_Rate} * ((k - j + 1) / 12))$$

25 where:

Amount_i = calculated amount by forecast period,

Amount₀ = initial amount,

i = forecast period,

j = first month in a forecast period,

30 k = last month in a forecast period, and

$$\text{Compounded_Rate} = \text{Rate}_1 * \text{Rate}_2 * \dots * \text{Rate}_i.$$

17. The method of claim 1, wherein the NPV forecast rule comprises a Declining balance method according to:

$$5 \quad \text{Amount}_i = (k - j + 1) * \text{Amount}_0 - \frac{\text{Amount}_0}{n} * \frac{(k - j + 1) * (k + j)}{2}$$

where:

Amount_i = calculated amount by forecast period,

Amount₀ = initial amount,

10 i = forecast period,

j = first month in a forecast period,

k = last month in a forecast period, and

n = amortization term.

15 18. The method of claim 1, wherein the NPV forecast rule comprises an Interest - Unpaid Principal method according to:

$$\text{Amount}_i = \text{Amount} * (k - j + 1) - \frac{\text{Amount}_0}{(1 + r)^n - 1} * \left[\frac{(1 + r)^j - (1 + r)^{k+1}}{-r} - (k - j + 1) \right]$$

20 where:

Amount_i = calculated amount by forecast period,

Amount₀ = initial amount,

i = forecast period,

j = first month in a forecast period,

25 k = last month in a forecast period,

n = amortization term, and

r = amortization rate.

19. The method of claim 1, wherein the NPV forecast rule comprises an Interest - Paid Principal method according to:

$$\text{Amount}_i = \text{Amount}_0 * \left[\frac{(1+r)^{k+1} - (1+r)^j}{r} \right]$$

where:

- 5 Amount_i = calculated amount by forecast period,
 Amount_0 = initial amount,
 i = forecast period,
 j = first month in a forecast period,
 k = last month in a forecast period, and
 10 r = amortization rate.

20. The method of claim 1, wherein the NPV forecast rule comprises a
 Constant method according to:

15 $\text{Amount}_i = \text{Amount}_0$

where:

Amount_i = calculated amount by forecast period, and
 Amount_0 = initial amount.

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21. A system for performing financial processing, comprising:
 one or more computers;
 logic, performed by the computers, for:

- 25 (a) selecting accounts, amounts and rates from account data stored in a
 database using selection criteria specified by one or more rules; and
 (b) performing one or more Net Present Value (NPV) calculations on the
 selected accounts by applying one or more NPV forecast rules to the selected
 accounts using the selected amounts and rates, wherein the NPV calculations
 determine a present value of an expected profitability value of current products.

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22. The system of claim 21, wherein the step of performing the FV calculations comprises applying the NPV forecast rules to the selected accounts and applying NPV attrition rules to results of the NPV forecast rules.

5 23. The system of claim 21, wherein the NPV is a net present profitability value.

24. The system of claim 21, wherein the selected accounts contain current profitability values.

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25. The system of claim 24, wherein the current profitability data is aggregated to provide an initial amount for the NPV calculations.

15 26. The system of claim 21, wherein the selected amounts are forecast amounts.

27. The system of claim 21, wherein the selected rates are NPV forecast rates.

20 28. The system of claim 21, wherein a user specifies one or more forecast periods over which the NPV calculations are performed.

29. The system of claim 28, wherein a user specifies one or more rates for the forecast periods.

25 30. The system of claim 21, wherein the logic for applying the NPV forecast rules comprises:

logic for matching the NPV forecast rule against the selected accounts;

logic for obtaining an amount to be forecast from the matched accounts using forecast amount selection criteria specified in the NPV forecast rule;

30 logic for obtaining account level information needed from the matched account data;

logic for obtaining an Assumed Cash Flow for the matched accounts;
logic for obtaining a Contractual Cash Flow from matched accounts;
logic for mapping remaining terms of the matched accounts to forecast periods;
logic for calculating amounts for each forecast period using the NPV forecast

5 rule; and

logic for storing the amounts.

31. The system of claim 21, wherein the NPV forecast rule comprises a
Constant (no compounding) method according to:

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$$\text{Amount}_i = \text{Amount}_0 * (1 + R_0) * ((k - j + 1) / 12)$$

where:

Amount_i = calculated amount by forecast period,

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Amount_0 = initial amount,

R_0 = initial rate,

i = forecast period,

j = first month in a forecast period, and

k = last month in a forecast period.

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32. The system of claim 21, wherein the NPV forecast rule comprises a
Constant (with compounding) method according to:

$$\text{Amount}_i = \text{Amount}_0 * (1 + R_m)^i * ((k - j + 1) / 12)$$

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where:

Amount_i = calculated amount by forecast period,

Amount_0 = initial amount,

R_m = monthly rate,

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i = forecast period,

j = first month in a forecast period, and

k = last month in a forecast period.

33. The system of claim 21, wherein the NPV forecast rule comprises an Additive (no compounding) method according to:

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$$\text{Amount}_i = \text{Amount}_0 * (1 + i * (R_0 / 12)) * ((k - j + 1) / 12)$$

where:

Amount_i = calculated amount by forecast period,

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Amount₀ = initial amount,

R₀ = initial rate,

i = forecast period,

j = first month in a forecast period, and

k = last month in a forecast period.

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34. The system of claim 21, wherein the NPV forecast rule comprises an Additive (with compounding) method according to:

$$\text{Amount}_i = \text{Amount}_0 * (1 + \text{Compounded_Rate} * ((k - j + 1) / 12))$$

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where:

Amount_i = calculated amount by forecast period,

Amount₀ = initial amount,

i = forecast period,

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j = first month in a forecast period,

k = last month in a forecast period, and

Compounded_Rate = Rate₁ * Rate₂ * ... * Rate_i.

35. The system of claim 21, wherein the NPV forecast rule comprises a Manual (no compounding) method according to:

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$$\text{Amount}_i = \text{Amount}_0 * (1 + R_{\text{man}}) * ((k - j + 1) / 12)$$

where:

Amount_i = calculated amount by forecast period,

5 Amount_0 = initial amount,

R_{man} = manual rate,

i = forecast period,

j = first month in a forecast period, and

k = last month in a forecast period.

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36. The system of claim 21, wherein the NPV forecast rule comprises a Manual (with compounding) method according to:

$$\text{Amount}_i = \text{Amount}_0 * (1 + \text{Compounded_Rate} * ((k - j + 1) / 12))$$

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where:

Amount_i = calculated amount by forecast period,

Amount_0 = initial amount,

i = forecast period,

20 j = first month in a forecast period,

k = last month in a forecast period, and

$\text{Compounded_Rate} = \text{Rate}_1 * \text{Rate}_2 * \dots * \text{Rate}_i.$

37. The system of claim 21, wherein the NPV forecast rule comprises a
25 Declining balance method according to:

$$\text{Amount}_i = (k - j + 1) * \text{Amount}_0 - \frac{\text{Amount}_0}{n} * \frac{(k - j + 1) * (k + j)}{2}$$

where:

30 Amount_i = calculated amount by forecast period,

Amount₀ = initial amount,
i = forecast period,
j = first month in a forecast period,
k = last month in a forecast period, and
n = amortization term.

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38. The system of claim 21, wherein the NPV forecast rule comprises an Interest - Unpaid Principal method according to:

$$10 \quad \text{Amount}_i = \text{Amount} * (k - j + 1) - \frac{\text{Amount}_0}{(1 + r)^n - 1} * \left[\frac{(1 + r)^j - (1 + r)^{k+1}}{-r} - (k - j + 1) \right]$$

where:

Amount_i = calculated amount by forecast period,
Amount₀ = initial amount,
i = forecast period,
j = first month in a forecast period,
k = last month in a forecast period,
n = amortization term, and
r = amortization rate.

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39. The system of claim 21, wherein the NPV forecast rule comprises an Interest - Paid Principal method according to:

$$\text{Amount}_i = \text{Amount}_0 * \left[\frac{(1 + r)^{k+1} - (1 + r)^j}{r} \right]$$

25

where:

Amount_i = calculated amount by forecast period,
Amount₀ = initial amount,
i = forecast period,

j = first month in a forecast period,
k = last month in a forecast period, and
r = amortization rate.

- 5 40. The system of claim 21, wherein the NPV forecast rule comprises a
Constant method according to:

$$\text{Amount}_i = \text{Amount}_0$$

10 where:

Amount_i = calculated amount by forecast period, and

Amount₀ = initial amount.

- 15 41. An article of manufacture embodying logic for performing financial
processing in one or more computers, the logic comprising:

(a) selecting accounts, amounts and rates from account data stored in a database
using selection criteria specified by one or more rules; and

- 20 (b) performing one or more Net Present Value (NPV) calculations on the selected
accounts by applying one or more NPV forecast rules to the selected accounts using the
selected amounts and rates, wherein the NPV calculations determine a present value of an
expected profitability value of current products.

- 25 42. The article of claim 41, wherein the step of performing the FV
calculations comprises applying the NPV forecast rules to the selected accounts and
applying NPV attrition rules to results of the NPV forecast rules.

43. The article of claim 41, wherein the NPV is a net present profitability
value.

- 30 44. The article of claim 41, wherein the selected accounts contain current
profitability values.

45. The article of claim 44, wherein the current profitability data is aggregated to provide an initial amount for the NPV calculations.

5 46. The article of claim 41, wherein the selected amounts are forecast amounts.

47. The article of claim 41, wherein the selected rates are NPV forecast rates.

10 48. The article of claim 41, wherein a user specifies one or more forecast periods over which the NPV calculations are performed.

49. The article of claim 48, wherein a user specifies one or more rates for the forecast periods.

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50. The article of claim 41, wherein the step of applying the NPV forecast rules comprise:

matching the NPV forecast rule against the selected accounts;
obtaining an amount to be forecast from the matched accounts using forecast
20 amount selection criteria specified in the NPV forecast rule;
obtaining account level information needed from the matched account data;
obtaining an Assumed Cash Flow for the matched accounts;
obtaining a Contractual Cash Flow from matched accounts;
mapping remaining terms of the matched accounts to forecast periods;
25 calculating amounts for each forecast period using the NPV forecast rule; and
storing the amounts.

51. The article of claim 41, wherein the NPV forecast rule comprises a Constant (no compounding) method according to:

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$$\text{Amount}_i = \text{Amount}_0 * (1 + R_0) * ((k - j + 1) / 12)$$

where:

Amount_i = calculated amount by forecast period,

Amount₀ = initial amount,

5 R₀ = initial rate,

i = forecast period,

j = first month in a forecast period, and

k = last month in a forecast period.

10 52. The article of claim 41, wherein the NPV forecast rule comprises a Constant (with compounding) method according to:

$$\text{Amount}_i = \text{Amount}_0 * (1 + R_m)^i * ((k - j + 1) / 12)$$

15 where:

Amount_i = calculated amount by forecast period,

Amount₀ = initial amount,

R_m = monthly rate,

i = forecast period,

20 j = first month in a forecast period, and

k = last month in a forecast period.

53. The article of claim 41, wherein the NPV forecast rule comprises an Additive (no compounding) method according to:

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$$\text{Amount}_i = \text{Amount}_0 * (1 + i * (R_0 / 12)) * ((k - j + 1) / 12)$$

where:

Amount_i = calculated amount by forecast period,

30 Amount₀ = initial amount,

R₀ = initial rate,

i = forecast period,
j = first month in a forecast period, and
k = last month in a forecast period.

- 5 54. The article of claim 41, wherein the NPV forecast rule comprises an Additive (with compounding) method according to:

$$\text{Amount}_i = \text{Amount}_0 * (1 + \text{Compounded_Rate} * ((k - j + 1) / 12))$$

10 where:

Amount_i = calculated amount by forecast period,

Amount₀ = initial amount,

i = forecast period,

j = first month in a forecast period,

15 k = last month in a forecast period, and

Compounded_Rate = Rate₁ * Rate₂ * ... * Rate_i.

55. The article of claim 41, wherein the NPV forecast rule comprises a Manual (no compounding) method according to:

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$$\text{Amount}_i = \text{Amount}_0 * (1 + R_{\text{man}}) * ((k - j + 1) / 12)$$

where:

Amount_i = calculated amount by forecast period,

25 Amount₀ = initial amount,

R_{man} = manual rate,

i = forecast period,

j = first month in a forecast period, and

k = last month in a forecast period.

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56. The article of claim 41, wherein the NPV forecast rule comprises a Manual (with compounding) method according to:

$$\text{Amount}_i = \text{Amount}_0 * (1 + \text{Compounded_Rate} * ((k - j + 1) / 12))$$

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where:

Amount_i = calculated amount by forecast period,

Amount_0 = initial amount,

i = forecast period,

10 j = first month in a forecast period,

k = last month in a forecast period, and

$\text{Compounded_Rate} = \text{Rate}_1 * \text{Rate}_2 * \dots * \text{Rate}_i$.

57. The article of claim 41, wherein the NPV forecast rule comprises a
15 Declining balance method according to:

$$\text{Amount}_i = (k - j + 1) * \text{Amount}_0 - \frac{\text{Amount}_0}{n} * \frac{(k - j + 1) * (k + j)}{2}$$

where:

20 Amount_i = calculated amount by forecast period,

Amount_0 = initial amount,

i = forecast period,

j = first month in a forecast period,

k = last month in a forecast period, and

25 n = amortization term.

58. The article of claim 41, wherein the NPV forecast rule comprises an Interest - Unpaid Principal method according to:

$$\text{Amount}_i = \text{Amount} * (k - j + 1) - \frac{\text{Amount}_0}{(1 + r)^n - 1} * \left[\frac{(1 + r)^j - (1 + r)^{k+1}}{-r} - (k - j + 1) \right]$$

where:

Amount_i = calculated amount by forecast period,

5 Amount₀ = initial amount,

i = forecast period,

j = first month in a forecast period,

k = last month in a forecast period,

n = amortization term, and

10 r = amortization rate.

59. The article of claim 41, wherein the NPV forecast rule comprises an Interest - Paid Principal method according to:

$$15 \quad \text{Amount}_i = \text{Amount}_0 * \left[\frac{(1 + r)^{k+1} - (1 + r)^j}{r} \right]$$

where:

Amount_i = calculated amount by forecast period,

Amount₀ = initial amount,

20 i = forecast period,

j = first month in a forecast period,

k = last month in a forecast period, and

r = amortization rate.

25 60. The article of claim 41, wherein the NPV forecast rule comprises a Constant method according to:

$$\text{Amount}_i = \text{Amount}_0$$

where:

Amount_i = calculated amount by forecast period, and

Amount_0 = initial amount.